

MASTER LINK

SCORE DISTRIBUTION  
WRITING FINAL TEST

| NO                              | A1  | A2  |                                 |
|---------------------------------|---|---|---------------------------------|
| 1                               | 87  | 77  | 1                               |
| 2                               | 87  | 78  | 2                               |
| 3                               | 88  | 78  | 3                               |
| 4                               | 88  | 79  | 4                               |
| 5                               | 88  | 80  | 5                               |
| 6                               | 88  | 80  | 6                               |
| 7                               | 89  | 81  | 7                               |
| 8                               | 89  | 81  | 8                               |
| 9                               | 89  | 83  | 9                               |
| 10                              | 89  | 83  | 10                              |
| 11                              | 90  | 84  | 11                              |
| 12                              | 90  | 85  | 12                              |
| 13                              | 78  | 80  | 1                               |
| 14                              | 78  | 81  | 2                               |
| 15                              | 78  | 82  | 3                               |
| 16                              | 79  | 82  | 4                               |
| 17                              | 79  | 84  | 5                               |
| 18                              | 80  | 84  | 6                               |
| 19                              | 81  | 85  | 7                               |
| 20                              | 82  | 85  | 8                               |
| 21                              | 83  | 85  | 9                               |
| 22                              | 83  | 86  | 10                              |
| 23                              | 84  | 87  | 11                              |
| 24                              | 85  | 88  | 12                              |
| MEAN SCORE                      |   |   |                                 |
| A <sub>1</sub>                  | A <sub>1</sub> B <sub>1</sub>                                 | A <sub>2</sub> B <sub>1</sub>                                 | B <sub>1</sub>                  |
| 84,67                           | 88,50   | 80,75   | 84,63                           |
| A <sub>2</sub>                  | A <sub>1</sub> B <sub>2</sub>                                 | A <sub>2</sub> B <sub>2</sub>                                 | B <sub>2</sub>                  |
| 82,42                           | 80,83   | 84,08   | 82,46                           |
| 2,25                            | 7,67  | -3,33   | 2,17                            |
| A <sub>1</sub> > A <sub>2</sub> | A <sub>1</sub> B <sub>1</sub> > A <sub>2</sub> B <sub>1</sub> | A <sub>2</sub> B <sub>2</sub> > A <sub>2</sub> B <sub>1</sub> | B <sub>1</sub> > B <sub>2</sub> |
| OK                              | OK  | OK  | OK                              |

CHECK PREREQUISITE

1 NORMALITY

| NO | VARIABLE            | X                             | n  | L <sub>0</sub> Max | L <sub>tabb</sub> | Decision | Result | Test decision   | Result |
|----|---------------------|-------------------------------|----|--------------------|-------------------|----------|--------|-----------------|--------|
| 1  | Quantum             | A <sub>1</sub>                | 24 | 0,1186             | 0,1730            | Lo < Lt  | Normal | Ho was accepted | OK     |
| 2  | DI                  | A <sub>2</sub>                | 24 | 0,0975             | 0,1730            | Lo < Lt  | Normal | Ho was accepted | OK     |
| 3  | High CQ             | B <sub>1</sub>                | 24 | 0,1272             | 0,1730            | Lo < Lt  | Normal | Ho was accepted | OK     |
| 4  | Low CQ              | B <sub>2</sub>                | 24 | 0,0884             | 0,1730            | Lo < Lt  | Normal | Ho was accepted | OK     |
| 5  | Quantum and High CQ | A <sub>1</sub> B <sub>1</sub> | 12 | 0,1915             | 0,2420            | Lo < Lt  | Normal | Ho was accepted | OK     |
| 6  | Quantum and Low CQ  | A <sub>1</sub> B <sub>2</sub> | 12 | 0,1809             | 0,2420            | Lo < Lt  | Normal | Ho was accepted | OK     |
| 7  | DI and High CQ      | A <sub>2</sub> B <sub>1</sub> | 12 | 0,1308             | 0,2420            | Lo < Lt  | Normal | Ho was accepted | OK     |
| 8  | DI and Low CQ       | A <sub>2</sub> B <sub>2</sub> | 12 | 0,1356             | 0,2420            | Lo < Lt  | Normal | Ho was accepted | OK     |

| Q   | Z   | Z   |
|-----|-----|-----|
| 31  | 29  | 30  |
| 66  | 64  | 65  |
| 101 | 99  | 100 |
| 136 | 134 | 135 |
| 171 | 169 | 170 |
| 206 | 204 | 205 |
| 241 | 239 | 240 |
| 276 | 274 | 275 |

2 HOMOGENEITY

| NO | FORMULA      | γ <sub>2</sub> obs | γ <sub>2</sub> tabb | Decision                            | Result  | Test decision   | Result |
|----|--------------|--------------------|---------------------|-------------------------------------|---------|-----------------|--------|
| 1  | VERSI KAMPUS | 6,843              | 7,81                | γ <sub>2</sub> o < γ <sub>2</sub> t | Homogen | Ho was accepted | OK     |
| 2  | VERSI PALGUN | 6,723              | 7,815               | γ <sub>2</sub> o < γ <sub>2</sub> t | Homogen | Ho was accepted | OK     |
|    | VERSI WIWIK  | 6,723              | 7,815               | γ <sub>2</sub> o < γ <sub>2</sub> t | Homogen | Ho was accepted | OK     |
|    | WIWIK BARIS  | 3,129              | 3,841               | γ <sub>2</sub> o < γ <sub>2</sub> t | Homogen | Ho was accepted | OK     |
|    | WIWIK KOLOM  | 3,570              | 3,841               | γ <sub>2</sub> o < γ <sub>2</sub> t | Homogen | Ho was accepted | OK     |

TESTING HYPOTHESES

1 ANOVA

| NO | Source of Variance               | SS     | d.f | MS      | Fobs    | Ft(.05) | Result  | Decision    | Ft(.01) | Result  | Decision    |
|----|----------------------------------|--------|-----|---------|---------|---------|---------|-------------|---------|---------|-------------|
| 1  | Between Column (B)               | 60,75  | 1   | 60,750  | 12,271  | 4,06    | Fo > Ft | Significant | 7,25    | Fo > Ft | Significant |
| 2  | Between Rows (A)                 | 56,33  | 1   | 56,333  | 11,379  | 4,06    | Fo > Ft | Significant | 7,25    | Fo > Ft | Significant |
| 3  | Column by rows /Interaction (AB) | 363,00 | 1   | 363,000 | 73,322  | 4,06    | Fo > Ft | Significant | 7,25    | Fo > Ft | Significant |
| 4  | Between groups (G)               | 480,08 | 3   | 160,028 | 96,972  |         |         |             |         |         |             |
| 5  | Within groups (E)                | 217,83 | 44  | 4,951   | 44,000  |         |         |             |         |         |             |
| 6  | Total (T)                        | 697,92 | 47  | 14,849  | 140,972 |         |         |             |         |         |             |

2 TUKEY

| NO | Comparative Variables           | X1    | X2    | Difference | qobs  | qt(.05) | Result  | Decision    | Ft(.01) | Result  | Decision    |
|----|---------------------------------|-------|-------|------------|-------|---------|---------|-------------|---------|---------|-------------|
| 1  | Columns (Method) : Quantum > DI | 84,67 | 82,42 | 2,25       | 4,95  | 3,79    | qo > qt | Significant | 4,70    | qo > qt | Significant |
| 2  | Rows (CQ) : High > Low          | 84,63 | 82,46 | 2,17       | 4,77  | 3,79    | qo > qt | Significant | 4,70    | qo > qt | Significant |
| 3  | Cells : Quantum High > DI High  | 88,50 | 80,75 | 7,75       | 12,07 | 3,79    | qo > qt | Significant | 4,70    | qo > qt | Significant |
| 4  | Cells : Quantum Low < DI Low    | 80,83 | 84,08 | -3,25      | 5,06  | 3,79    | qo > qt | Significant | 4,70    | qo > qt | Significant |

CHECK DATA

- 1 PREREQUISITE NORMALITY
- 2 PREREQUISITE HOMOGENEITY
- 3 ANOVA
- 4 TUKEY

|   | 4  | SUDAH | HARUS | MASIH |
|---|----|-------|-------|-------|
| 1 | OK | 8     | 8     | 0     |
| 2 | OK | 5     | 5     | 0     |
| 3 | OK | 6     | 6     | 0     |
| 4 | OK | 8     | 8     | 0     |

KONFIGURASI DATA

OK

DESTAT

| NO | Data              | METHODS        |                |                |                |                               |                               |                               |                               |       |
|----|-------------------|----------------|----------------|----------------|----------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------|
|    |                   | 1              | 2              | 3              | 4              | 5                             | 6                             | 7                             | 8                             |       |
|    |                   | A <sub>1</sub> | A <sub>2</sub> | B <sub>1</sub> | B <sub>2</sub> | A <sub>1</sub> B <sub>1</sub> | A <sub>1</sub> B <sub>2</sub> | A <sub>2</sub> B <sub>1</sub> | A <sub>2</sub> B <sub>2</sub> |       |
| 1  | Respondents       | n              | 24             | 24             | 24             | 24                            | 12                            | 12                            | 12                            |       |
| 2  | Score             | Total          | 2032           | 1978           | 2031           | 1979                          | 1062                          | 970                           | 969                           | 1009  |
|    |                   | Hi             | 90             | 88             | 90             | 88                            | 90                            | 85                            | 85                            | 88    |
|    |                   | Lo             | 78             | 77             | 77             | 78                            | 87                            | 78                            | 77                            | 80    |
|    |                   | Range          | 12             | 11             | 13             | 10                            | 3                             | 7                             | 8                             | 8     |
| 3  | Class             | Result         | 5,55           | 5,55           | 5,55           | 5,55                          | 4,56                          | 4,56                          | 4,56                          |       |
|    |                   | Decision       | 5              | 5              | 5              | 5                             | 4                             | 4                             | 4                             |       |
| 4  | Interval          | Result         | 2,4            | 2,20           | 2,60           | 2,00                          | 0,75                          | 1,75                          | 2,00                          |       |
|    |                   | Decision       | 3              | 3              | 3              | 2                             | 1                             | 2                             | 3                             |       |
| 5  | Mean              | ID             | 84,67          | 82,42          | 84,63          | 82,46                         | 88,50                         | 80,83                         | 80,75                         | 84,08 |
|    |                   | FD 1           | 84,63          | 82,50          | 84,75          | 80,17                         | 88,50                         | 80,83                         | 80,50                         | 84,25 |
|    |                   | FD 2           | 84,63          | 82,50          | 84,75          | 80,17                         | 88,50                         | 80,83                         | 80,50                         | 84,25 |
| 6  | Mode              | ID             | 88,00          | 85,00          | 88,00          | 85,00                         | 88,00                         | 78,00                         | 78,00                         | 85,00 |
|    |                   | FD             | 88,50          | 83,93          | 88,50          | 80,50                         | 88,50                         | 78,75                         | 80,00                         | 84,79 |
| 7  | Median            | ID             | 86,00          | 82,50          | 86,00          | 82,50                         | 88,50                         | 80,50                         | 80,50                         | 84,50 |
|    |                   | FD             | 85,50          | 82,64          | 85,50          | 80,25                         | 88,50                         | 80,50                         | 80,30                         | 84,50 |
| 8  | Standar Deviation | ID             | 4,34           | 2,98           | 4,39           | 2,93                          | 1,00                          | 2,52                          | 2,56                          | 2,43  |
|    |                   | FD 1           | 4,51           | 3,15           | 4,36           | 2,18                          | 1,00                          | 2,39                          | 2,81                          | 2,60  |
|    |                   | FD 2           | 4,51           | 3,15           | 4,36           | 2,18                          | 1,00                          | 2,39                          | 2,81                          | 2,60  |
|    |                   | ID             | 4,34           | 2,98           | 4,39           | 2,93                          | 1,00                          | 2,52                          | 2,56                          | 2,43  |

| CQ                     | METHODS                          |          |             |                                   |          |             |                               |          |         |
|------------------------|----------------------------------|----------|-------------|-----------------------------------|----------|-------------|-------------------------------|----------|---------|
|                        | QUANTUM<br>(A1) or  c1           |          |             | DIRECT INSTRUCTION<br>(A2) or  c2 |          |             | Total<br>SUM (A or c) Methods |          |         |
| HIGH<br>(B1)<br>or  r1 | 1. A1B1 or  r1c1  or X1 or Xr1c1 |          |             | 2. A2B1 or  r1c2  or X2 or Xr1c2  |          |             | B1 or  r1  or Xr1 or Xr1c3    |          |         |
|                        | No                               | X1       | X12         | No                                | X2       | X22         | No                            | X r1     | X r12   |
|                        | n1                               | 12       | 12          | n2                                | 12       | 12          | nr1                           | 24       | 24      |
|                        | Σ X1                             | 1062     | 93.998      | Σ X2                              | 969      | 78.319      | Σ Xr1                         | 2031     | 172.317 |
| $\bar{X}$              | 88,50                            | 7.833,17 | $\bar{X}_0$ | 80,75                             | 6.526,58 | $\bar{X}_0$ | 84,63                         | 7.179,88 |         |
| LOW<br>(B2)<br>or  r2  | 3. A1B2 or  r2c1  or X3 or Xr2c1 |          |             | 4. A2B2 or  r2c2  or X4 or Xr2c2  |          |             | B2 or  r2  or Xr2 or Xr2c3    |          |         |
|                        | No                               | X3       | X32         | No                                | X4       | X42         | No                            | X r2     | X r22   |
|                        | n3                               | 12       | 12          | n4                                | 12       | 12          | n                             | 24       | 24      |
|                        | Σ X3                             | 970      | 78.478      | Σ X4                              | 1009     | 84.905      | Σ Xr2                         | 1979     | 163383  |
| $\bar{X}_0$            | 80,83                            | 6.539,83 | $\bar{X}_0$ | 84,08                             | 7.075,42 | $\bar{X}_0$ | 82,46                         | 6.807,63 |         |
| Total<br>CQ            | A1 or  c1  or Xc1 or Xr3c1       |          |             | A2 or  c2  or Xc2 or Xr3c2        |          |             | AB or  t  or Xt or Xr3c3      |          |         |
|                        | No                               | Xc1      | Xc12        | No                                | Xc2      | X c22       | No                            | X t      | Xt2     |
|                        | n                                | 24       | 24          | n                                 | 24       | 24          | nt                            | 48       | 48      |
|                        | Σ Xc1                            | 2032     | 172.476     | Σ Xc2                             | 1978     | 163.224     | Σ Xt                          | 4010     | 335.700 |
| $\bar{X}_0$            | 84,67                            | 7.186,50 | $\bar{X}_0$ | 82,42                             | 6.801,00 | $\bar{X}_0$ | 83,54                         | 6.993,75 |         |